

In the Claims

For the convenience of the Examiner, all claims are set forth below, whether or not an amendment has been made and whether or not newly added. Applicants refer Examiner to Appendix A attached hereto for a marked-up version of the amended claims.

95. (Amended) A method of producing an amplified broadband optical signal, said method comprising:

dividing an optical signal at a predetermined wavelength into a first beam having a wavelength less than the predetermined wavelength and a second beam having a wavelength greater than said predetermined wavelength;

directing said first beam to a Raman amplifier;

directing said second beam to a rare earth doped amplifier; and

combining said first and second beams to produce an amplified broadband optical signal.

96. (Amended) The method of claim 95, wherein said rare earth doped amplifier is an erbium-doped fiber amplifier.

97. (Amended) The method of claim 95, wherein the Raman amplifier amplifies and spectrally broadens the first beam and the rare earth doped amplifier amplifies and spectrally broadens the second beam.

Please cancel Claim 113 without prejudice or disclaimer.

99. (Amended) A broadband amplifier, comprising:
a splitter operable to be coupled to an input fiber, the splitter splitting an optical signal into at least a first wavelength and a second wavelength;
one or more Raman amplifiers coupled to the splitter;
one or more rare-earth doped optical amplifiers coupled to the splitter; and
a combiner coupled to the Raman amplifier and the rare-earth doped optical amplifier, the combiner combining at least the first wavelength and the second wavelength into an optical signal for communication to an output fiber operable to be coupled to the combiner.

100. (Amended) The amplifier of claim 99, wherein the splitter directs the first wavelength to the Raman amplifier and the second wavelength to the rare-earth doped optical amplifier.

Please cancel Claim 101 without prejudice or disclaimer.

102. (Amended) A broadband amplifier, comprising:
a splitter operable to be coupled to an input fiber, the splitter splitting an optical signal into at least a first wavelength and a second wavelength;
a first amplifier coupled to the splitter;
a second amplifier coupled to the splitter, wherein a pump wavelength of the first amplifier is larger than a pump wavelength of the second amplifier; and
a combiner coupled to the first amplifier and the second amplifier, the combiner combining at least the first wavelength and the second wavelength into an optical signal for communication to an output fiber operable to be coupled to the combiner.

103. (Amended) A broadband amplifier, comprising:
a splitter operable to be coupled to an input fiber, the splitter splitting an optical signal into at least a first wavelength and a second wavelength;
a distributed gain medium coupled to the splitter, the distributed gain medium providing gain through a third order non-linearity;
one or more rare-earth doped amplifiers coupled to the splitter; and
a combiner coupled to the distributed gain medium and the rare earth doped optical amplifier, the combiner combining at least the first wavelength and the second wavelength into an optical signal for communication to an output fiber operable to be coupled to the combiner.

104. (Amended) The amplifier of claim 103, wherein the splitter directs the first wavelength to the distributed gain medium and the second wavelength to the rare earth doped optical amplifier.

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Please cancel claims 120-158 without prejudice or disclaimer.